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Research Article

Exploring Intelligibility Across World Englishes: A VGT-Inspired Empirical Analysis

Dünya İngilizcelerinde Anlaşılabilirliğin İncelenmesi: VGT'den Esinlenen Ampirik Bir Araştırma

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Abstract

For many decades, English has functioned as a lingua franca that enables people with different mother tongues to communicate so that they can maintain their daily or professional lives. As the linguistic and acoustic features of their native languages differ, the way they use English differs, as well. These World Englishes have the possibility of going extreme, creating varieties which are incomprehensible to one another. These intelligibility issues can be prevented in some ways, one of which is to make sure the education system aims to familiarize learners with different varieties. In order to test this and help educational authorities take action if necessary, this study examines the comprehension levels of intermediate students who currently study at university. The comprehension test employing a VGT-inspired technique to avoid bias is completed with the help of audio tracks recorded by real speakers in six different varieties. This test has been applied to 200 preparatory school students at two different high-scale state universities, and its results have been analyzed by using Jamovi. British English took the lead in comprehension, while Indian and American Englishes were realized to be the least comprehended varieties in this study. The results may not verify the dominance of native varieties over non-native ones, yet they ensure that the more students are exposed to different varieties, the more they become able to comprehend and possibly communicate in them.

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Öz

İngilizce, onlarca yıldır farklı anadil sahiplerinin günlük ve mesleki iletişimlerini sürdürebilmelerini sağlayan bir ortak dil olarak işlev görmektedir. Ancak, bireylerin ana dillerinin dilbilgisel ve akustik özellikleri farklı olduğundan, İngilizceyi kullanma biçimleri de çeşitlilik göstermektedir. Bu Dünya İngilizceleri zamanla birbirleri tarafından anlaşılamayan çeşitler oluşturabilir. Anlaşılırlık sorunlarını önlemenin yollarından biri, eğitim sistemlerinin öğrencileri farklı İngilizce çeşitleriyle tanıştırmayı hedeflemesidir. Bu çalışmada, üniversite düzeyinde eğitim gören orta düzey öğrencilerin farklı İngilizce çeşitlerini anlama düzeyleri incelenmiştir. Önyargıyı azaltmak amacıyla VGT (Verbal Guise Technique)'den esinlenilmiş ve altı farklı İngilizce çeşidini konuşan gerçek konuşmacılar tarafından hazırlanan sesli materyallerle anlama testi uygulanmıştır. Test, iki büyük ölçekli devlet üniversitesinde toplam 200 hazırlık sınıfı öğrencisine uygulanmış ve sonuçlar Jamovi programı ile analiz edilmiştir. Bulgular, anlamada İngiliz İngilizcesinin öne çıktığını, Hint ve Amerikan İngilizcelerinin ise en az anlaşılan çeşitler olduğunu göstermektedir. Elde edilen veriler, standart İngilizce çeşitlerinin üstünlüğünü kanıtlamasa da, öğrencilerin farklı çeşitlere daha fazla maruz kalmaları durumunda hem anlama hem de iletişim becerilerinin artacağını ortaya koymaktadır. Bu sonuçlar, eğitim politikalarının ve müfredat tasarımının Dünya İngilizcelerine yer vermesi gerektiğini desteklemektedir.

Introduction

Having had the status of a global language and having connected people from different nations for centuries, the English language has been learned or acquired by billions of people across the world. "English occupies a unique place in the world today and in history. There has never been a language which has been used so much by so many different people" (Morrow, 2004, p.80). This dominance has given English the status of a "lingua franca", which is defined "as a way of referring to communication in English between speakers with different first languages" (Seidlhofer, 2005, p.339). That basically means people learn and speak the same language in various cities, countries, and even continents. As communication increasingly takes place in English between speakers from different nations, they bring diverse linguistic backgrounds into their use of the language. Not only have they adapted the grammatical and lexical structures, but they have also shaped English with the reflections of acoustical features of their native languages. Eventually, it has been commonly acknowledged by scholars that "as a consequence of its international use, English is being shaped at least as much by its non-native speakers as by its native speakers" (Seidlhofer, 2005, p.339), which created the term "World Englishes". "Englishes" in the term refers to "variation in form and function, use in linguistically and culturally distinct contexts, …" (Kachru, 1996, p.135). This variation poses the question of whether people can communicate with others who speak English influenced by different linguistic and cultural backgrounds, which has been a prominent topic in the literature for some time. As tolerant and welcoming as it may appear, this situation is also risky for a lingua franca, whose purpose is to serve as a common channel

of communication rather than to diversify and "divide up into mutually unintelligible varieties" (Widdowson, 1994, p. 383). The moment it stops functioning as the global language, the whole system may collapse, as "it is the most widely used language in the world in international trade, diplomacy, mass entertainment, international telecommunications and scientific publications as well as publishing newspapers and other books" (Rao, 2019, p.66). Of all the precautions that might be taken, English language education represents a structured approach through which many learners acquire English across different contexts in large groups. Therefore, this study aims to provide guidelines for authorities to revise policies and approaches so that learners can communicate effectively across different World Englishes, thereby maintaining English's role as a global language. Even though some studies in different contexts exist (such as Verbeke & Simon (2023) in the Dutch context, Pérez-Ramón et. al. (2022) in the Spanish and Czech contexts, Jeong et. al. (2022) in the Swedish context, etc.). In Türkiye, the studies on World Englishes mostly focus on the attitudes towards them (Akçay, 2020; Öztürk, 2019; Yilmaz, 2020). However, only a small body of research exists on the comprehension of different varieties (Büyükahıska & Uyar, 2019; Kurtuldu & Özkan, 2022), indicating the need for additional studies to establish generalizability and confirmation across various contexts.

Literature review

The Global Status of English

The global reach of English has transformed it from a national language into a shared communicative resource across diverse societies. Dauer (2005) supports this claim, stating "few would dispute that English is now the primary lingua franca, the language used to communicate among speakers of different languages throughout the world" (p.545). As it achieved this status, scholars coined new terms to highlight its significant role, and they are listed by Rao (2019).

> Among them, Ahulu (1977) coins it, "General English", McArthur (1987) says it, "World Standard (Spoken) English", whereas David Crystal (1997) invents a phrase, "English as a global language" and House (1999), Gnutzmann (2000) Seidlhofer (2001) & Jenkins (2007) name it as "English as a Lingua Franca". Furthermore, Widdowson (1997), Modiano (1999) and Jenkins (2000) coined another phrase, "English as an International Language" and Brutt-Griffler (2002) invents a new word, "World English". (as cited in Rao, 2019, p.66)

This abundance of terminology reflects an ongoing attempt to conceptualize the unprecedented spread of English and to determine what exactly is being described: a neutral communicative tool, a globalized standard, or a constellation of locally shaped varieties. While these labels differ in nuance, they all point to the same underlying reality: English now functions beyond the control of its native-speaking parties and is increasingly shaped by the linguistic repertoires of its users worldwide. "English as a lingua franca has become a much-debated issue in applied linguistics and English

language teaching thanks to the greater number of non-native speakers of English involved in global communication" (Kongkerd, 2013, p.4). The number of non-native speakers and their dominance provide evidence that non-native speakers, rather than native speakers, are shaping English. This process involves the spread of English to different parts of the world, driven by globalization. Locals adapt English by blending it with or drawing inspiration from their native languages to suit their needs and lifestyles. This process has been referred to by various names by scholars, such as "nativisation" (Kachru, 1986) and "indigenization" (Mufwene, 1988) and so on, which are mostly used interchangeably, though they have small differences to be distinguished by.

Conceptualizing World Englishes: Intelligibility, Comprehension, and Accentedness

Building on these processes, the concept of World Englishes captures the diversity of English as it is used across the globe. Different varieties emerge due to historical, social, and cultural influences, resulting in systematic differences in "specific words, pronunciation habits, and grammatical patterns of their own, which are unique to certain regional or national varieties" (Schneider, 2025, p.2). Though these varieties are supported because they provide "a global identity which gives them a sense of belonging to a worldwide culture in ELF contexts (Arnett, 2002; Ryan, 2006)" (as cited in Sung, 2014, p. 31), the risk that English may lose its function as the common communication channel is also acknowledged. At this point, scholars draw attention to three important concepts associated with World Englishes. Intelligibility, comprehensibility, and accentedness are three interconnected yet separate concepts that frequently appear in research. The term "intelligibility" refers to "the apprehension of the message in the sense intended by the speaker" (Nelson, 1982, p.63). While often used interchangeably (Gass & Varonis, 1984), some scholars distinguish "comprehensibility" as "a subjective measure of understanding that incorporates the notion of processing effort" (Huensch & Nagle, 2021, p. 627), which shifts its focus towards pragmatics of the speech. Therefore, "intelligible speech can exhibit low comprehensibility if listeners struggle to apprehend the intended message" (Huensch & Nagle, 2021, p. 627). The other term that appears in the World Englishes literature is "accentedness", which is defined as "the degree to which the listener believes an utterance differs phonetically from native-speaker utterances" (Munro & Derwing, 2001, p.454). These distinctions matter for the present study, as pronunciation-related variation, or especially the degree of accentedness, often emerges as the most immediate and perceptible marker of difference between English varieties, making it a central factor in listeners' judgments of intelligibility and overall processing effort.

World Englishes in English language education

Even though the presence of World Englishes highlights and appreciates cultural variety and globalization, it also poses challenges in various aspects of life. In the simplest terms, it can lead to communication breakdowns even during daily conversations between speakers with different native languages. "Where there is a significant difference in phonology between the speaker and listener's language groups, intelligibility levels are

likely to be lowest (Deterding & Kirkpatrick, 2006)" (as cited in Dewaele & McCloskey, 2015, p. 223). This practical concern aligns with a long-standing worry in the field: if phonological diversity continues to widen, "the language will divide up into mutually unintelligible varieties" (Widdowson, 1994, p. 383). In other words, scholars acknowledge the value of diversity, but they also underline a very real communicative risk, especially when pronunciation differences create barriers that go beyond only variation and begin to limit comprehensibility. In order to prevent this, some steps must be taken in different fields. Education, being one of them, will be a particular focus in the present study. While linguistic variety is undeniably valuable, it is also where confusion emerges most clearly, particularly in phonology, which is precisely why the present study focuses on this dimension.

"English as a lingua franca has become a much-debated issue in applied linguistics and English language teaching thanks to the greater number of non-native speakers of English involved in global communication" (Kongkerd, 2013, p. 4). The world of ELT tackled the issue, taking different perspectives. As English gained its global status, discussions intensified around which variety should actually be taught and how teaching English as a foreign or second language differs from teaching it as a lingua franca. Research in the area makes it clear that these approaches rest on fundamentally different classroom principles, which often stand in contrast. "These contradictions stem from what Levis (2005, p.370) has identified as two contradictory principles: the nativeness principle (it is possible and desirable to achieve native-like pronunciation in an FL) and the intelligibility principle (learners simply need to be understandable)" (as cited in Kirkpatrick et. al., 2008, p.360). Scholars can be categorized based on their attitudes toward the teaching of World Englishes. Nativeness principle, or nativism, which supports teaching of standard varieties in the classroom, is followed by scholars like Quirk (1990), Custred (1990) and Pavlou (1990). On the other hand, researchers such as Jenkins (2006) and Kilickaya (2009) argue that classroom instruction should reflect the realities of English as a lingua franca rather than prioritizing traditional native-speaker norms. This approach arises from the demands of today's globalized communication and a recognition of identity. "For example, given the trend of globalization, some researchers argue that many L2 learners and speakers of English around the world may desire a global identity which gives them a sense of belonging to a worldwide culture in ELF contexts (Arnett, 2002; Ryan, 2006)" (as cited in Sung, 2014, p.31). Teaching L2 learners to imitate the accent of a country seen as the owner of a global language may not be appropriate or desired in every context. For example, some L2 users may wish to express their L1 and/or national identities in ELF communication" (Sung, 2014, p.32). "The freedom to express their own local and ELF identities in their English would give them greater confidence as both English speakers and English teachers" (Jenkins, 2009, p.204). Therefore, rather than relying on a single, standardized variety, many scholars argue that preparing learners to communicate across different Englishes is a more realistic response to today's global linguistic landscape.

The presence of World Englishes and the need to generate speakers who may communicate across them, some revisions may be necessary in English language education policies. "This contextual and linguistic diversity inevitably calls for new approaches for teaching English as a foreign language (EFL) that acknowledge that many communicative exchanges in English are to take place among non-native speakers who adhere to different varieties of English" (Vivas-Peraza, 2023, p. 303). The learners of English will encounter non-native speakers more than those who speak standard varieties, such as British or American, which are traditionally more emphasized in current formal education (Sung, 2016, p.191). These non-native speakers will have their own way of pronouncing words since they are influenced by the acoustical features of their native languages (which can be called "L1 transfer"). Therefore, they may have issues comprehending the speech of these non-native speakers, and the communication may fail or be misleading. In order to avoid that, Kuo (2006) states that it is a job that can be done by making changes in the educational system regarding English education. "A better way to prepare learners for international communication would be to provide a description, within the field of phonology and morphosyntax, of what learners need in order to achieve and sustain mutual comprehension" (Kuo, 2006, p. 214). Raising the awareness of the learners and familiarizing them with the possible varieties they can come across may create a big difference in their global interactions, as proved by several studies. "The results indicated that familiarity with the accent led to better comprehension" (Ockey & French, 2016, p.695). One of the ways to enhance familiarity may be exposure. "We should teach English so that they will be able to understand/tolerate many accents and varieties through exposure" (Kilickaya, 2009, p.37). Moreover, the term "dialect awareness" was introduced to refer to "'activities that promote an understanding of and appreciation for language' variation (Wolfram 1999, 48)", and educational programs that may help raise this awareness were proposed" (as cited in Bozoglan & Gok, 2017, p.775). In some contexts, such as in the USA and Australia, it is common practice to inform students about the mechanical and cultural aspects of different varieties, as Yiakoumetti (2007) states. "These programmes have focused on the study of dialect diversity to teach students not only about the structure of vernacular dialects but also about their role in speech communities" (p.54). When considered collectively, these initiatives indicate that, in many regions of the world, integrating linguistic variety into language instruction through these exemplified procedures has become a standard practice. However, it is still less clear how this will work in places like Türkiye, which falls into Kachru's (1985) Expanding Circle, where English is primarily taught as a foreign language in limited contexts. Although this study does not analyze classroom procedures directly, it offers an indirect perspective by analyzing learners' listening performance and responses to different English types. In this regard, students' comprehension of variety-based accented speech is a valuable predictor of how restricted exposure might arise in their knowledge of spoken English.

Empirical Insights from Previous Research

The globalization of English has raised many questions that influence English language studies. The policies on which variety to teach must be thoroughly reviewed and revised as needed. Many scholars have provided valuable insights into the field through their research. Thanks to those works, it was discovered that having a strong foreign accent does not always negatively impact L2 intelligibility or comprehensibility (Derwing & Munro, 1995; Derwing & Munro, 1997; Ockey & French, 2016). On the other hand, communication across World Englishes may break down due to various factors (Gass & Varonis, 1984). Considering the research conducted in the field, these factors can be listed as "a variety of pronunciations of English and different sounds and speech styles as well as wider socio-cultural and pragmatic competence and general variables" (Jung, 2010, p.159) and "accent familiarity" (Doloricon & Langga, 2022; Gass & Varonis, 1984; Ockey& French, 2016). Therefore, this study seeks to provide a localized snapshot of how Turkish university students comprehend different English varieties. By identifying the extent of their understanding, the findings may guide future research to examine the underlying factors more closely, and, where necessary, explore ways to improve comprehension.

To assess the intelligibility and comprehensibility of various language varieties, researchers have proposed and utilized several methods and procedures. As previously expressed, while intelligibility is typically about whether the listener can understand the linguistic message accurately, comprehensibility is more about how effortlessly that message is processed. Therefore, the main focus of the study will be on intelligibility, although both aspects will be explored to some extent since they can be examined through similar methods. "Comprehensibility has been variously measured, including through Likert Scales, also similar to the L2 paradigm, as well as listening comprehension questions and work sheets" (Hansen Edwards et al., 2018, p.539). Similarly, Kim (2008) lists "A wide array of techniques for assessing intelligibility (e.g., cloze test, multiple-choice question, comprehension question, picture selection, true/false question, summarization, and transcription)" (p.9). Another widely used tool in studies on language attitudes, the Verbal Guise Technique (VGT), allows listeners to evaluate speakers on a semantic-differential scale, allowing researchers to explore attitudes toward different linguistic varieties across social, ethnic, or regional dimensions (Lambert et al. 1960; McKenzie 2008b) (as cited in Bozoglan & Gok, 2017). In the present study, VGT was adapted to suit the research aims, and, although its full procedure will be described later, it is worth noting here that the technique enables the researcher to conceal both the speakers' identities and the varieties they use, reducing the possibility of bias.

Building on this overall picture, it is also important to highlight studies closely aligned with the present research's focus, particularly those examining how learners comprehend different English varieties in both Turkish and international contexts.
Some studies examine the comprehension of native language varieties, as well as a non-native variety that is mainly spoken in the country where the research is conducted and have found that speakers tend to understand their nation's non-native English variety

better (Amano, 2019; Levin, 1997; Moinzadeh et. al., 2012; Xie & Fowler, 2013). Many studies in the field have found that native English speakers are more easily understood than non-native speakers. (Baptiste, 2022; Verbeke & Simon, 2023) . On the other hand, research in the field has shown a tendency to understand non-native varieties more easily than native ones presented in the study (Smith & Nelson, 2019). Alternatively, some studies suggest the opposite, arguing that there is no significant difference in comprehension between native and non-native varieties. (Jeong et al., 2022; Kang et al., 2019; Walt, 2000).

In the Turkish context, there is a shortage of studies examining the comprehension of different language varieties. However, some existing studies provide limited insight into how Turkish learners' comprehension of native and non-native varieties differs. Güneş (2025) stated that Turkish learners understood the Turkish variety of English better than native varieties, while Yildiz (2017), based on her research findings, claimed the opposite. Kurtuldu and Ozkan (2022) stated that native varieties were better understood than non-native ones, and that familiarity had a positive effect. They emphasized that their participants struggled with Pakistani English, which they were unfamiliar with, but found American English much easier to understand. A similar effect was reported by Büyükahıska and Uyar (2019), whose participants performed better in British English, "possibly due to the fact that they had been practicing their listening skills with British-accented tapes since the beginning of their language education" (p. 1388). On the other hand, Yildiz (2017) reported that "students' familiarity with the accent does not have an important effect on their comprehension" (p.121). Therefore, the findings and their implications appear to be profoundly context-bound and shaped by the current dynamics.

Overall, these studies point to an inconsistent but recurring theme: comprehension appears to be mediated not simply by whether a variety is native or non-native, but by learners' prior exposure to and familiarity with that variety. Yet the small number of studies and their divergent findings underscore the need for further research that can offer a more comprehensive and comparable picture of Turkish learners' comprehension across multiple varieties. Therefore, this study aims to determine whether students have been sufficiently exposed to different varieties of English to comprehend effectively within a university context. Accordingly, the following research questions will be addressed based on the findings:

RQ1: What are the comprehension scores of preparatory school students for each English variety tested?

RQ2: Are there statistically significant differences between students' comprehension scores across the English varieties?

Methodology

Research Design

This study adopts a quantitative, post-positivist research approach, which serves the objective of analyzing students' comprehension of diverse English varieties through explicit, measurable data. A post-positivist stance is suitable here because the study starts with certain expectations about possible differences across varieties and evaluates these expectations using statistical outcomes rather than subjective judgment. The design is descriptive and comparative, and it follows a within-subjects structure in which every participant listens to each variety used in the study. Working with the same group across all conditions allows a straightforward comparison of comprehension levels and avoids the variability that usually comes with comparing separate groups (Field, 2008; Plonsky & Gass, 2011). The study is also cross-sectional, which aligns with its goal of capturing learners' current comprehension levels.

Setting & Participants

This study takes place in Türkiye, an expanding circle country (Kachru, 1985) where English is taught as a foreign language. Consequently, it can be stated that learners are exposed to English mostly at school and, as minor factors, via the media and the entertainment industry.

For the initial phase of the study, where the voice recordings were obtained, people from six different nationalities (American, British, Indian, South African, Russian, and Spanish) were contacted individually with a purposive sampling (the reasoning for the variety selection will be explained in the upcoming section). The six speakers were chosen using a clear set of criteria to keep the recordings both intelligible and comparable across varieties. At the beginning, the strategy was to avoid speakers who were very young or noticeably older, since age can affect articulation, prosody, and overall clarity (Munro & Derwing, 1995). Even though the initial pool was wider, the final group naturally settled into the 30–40 range, mainly because this was the common decade shared by all eligible speakers across varieties. This gave the recordings a more consistent baseline without forcing any artificial selection. All non-native speakers self-reported having at least a B2 level of English. While this proficiency could not be verified through standardized exams such as TOEFL or IELTS - primarily because a matched set of speakers across all varieties with official scores was not available among potential candidates - their stated level was cross-checked informally during the recording session. This brief screening ensured that their fluency and overall command of English were consistent with upper-intermediate proficiency, even though no formal certification was required for inclusion. Indian and South African speakers confirmed that they graduated from English-medium schools, which are very common in their countries, as they were categorized as "Outer Circle" countries by Kachru (1985). None had lived abroad, which helped prevent exposure-based accent changes that could complicate the distinctions between varieties. They also

confirmed they had no speech-related disabilities, which was a crucial criterion to keep the recordings naturally intelligible. Gender balance was maintained (three female, three male), although gender itself was not included as a variable. In this study, initial descriptive statistics showed no consistent gender-based difference in comprehension scores; however, given mixed findings in the literature, it was acknowledged as a limitation, and recommended that future research examine this more systematically.

The question of regional sub-varieties is naturally more complicated. Real speakers do not fit neatly into textbook "standard accents," and this study was no exception. In the preliminary interviews held in the selection process, the speakers reported representing the common and widely recognized regional forms of their national varieties, but it would be risky to claim they reflected strictly codified accents such as RP or General American. While this increases ecological validity (because learners rarely encounter perfectly standardized accents in real life), it also creates a methodological limitation. Instead of assigning artificial labels, it is more transparent to acknowledge this variation and note its relevance for real-world intelligibility research.

A summary of the speaker characteristics, including demographic information and linguistic background factors relevant to stimulus preparation, is given in the following table.

Table 1. *Speakers' Profile*

Speaker	Nationality	Gender	Age	Regional Background	English Proficiency	Lived Abroad	Speech-related Disability
S1	American	Male	30	Tennessee	Native language	No	No
S2	British	Female	33	Exeter	Native Language	No	No
S3	Indian	Female	32	Delhi	Advanced English user (educated in English-medium contexts)	No	No
S4	South African	Male	38	Afrikaans background	Advanced English user (educated in English-medium contexts)	No	No
S5	Russian	Male	36	Not precisely known	Minimum B2 (self-reported)	No	No
S6	Spanish	Female	40	Not precisely known	Minimum B2 (self-reported)	No	No

The sampling of the participants for the comprehension test was made on a voluntary basis (convenience sampling), involving 200 participants from two different schools. The determination of the sampling size is made considering certain factors in the

setting. “If the sample size is too low, it lacks precision to provide reliable answers to the research questions investigated. If the sample size is too large, time and resources could be wasted often for minimal gain” (Chuan et. al., 2006, p. 78). As the comprehension test was planned to be carried out with intermediate-level participants, the number was quite limited in both institutions because the other levels were not included at all to keep the data clean. Moreover, to make this study academically more grounded, a Power Analysis was completed using G Power (Faul et al., 2007) based on the recommendations of Cohen (1988). Assuming a medium effect size (f = 0.25), an alpha level of .05, and a desired power of 80, the analysis revealed that 28 participants would give an adequate understanding to answer the research questions. Therefore, 200 participants hold a high statistical power, giving room to eliminate random respondents. The participants of the study were 200 intermediate-level students enrolled in the Schools of Foreign Languages of two large public universities in Türkiye. Both institutions offer English preparatory programs, but their profiles differ slightly, which helped create a more representative sample of Turkish university students studying English. At the first university, English is used as a medium of instruction. Students must take an institutional English proficiency exam when they first enter the university, and the threshold of this exam is set around the B2 level. Students who score at or above this level are allowed to skip the preparatory program and move directly into their departments. Those who do not meet this threshold study in the preparatory school—usually for at least one semester—until they are ready to take the exam again. Even after moving to their departments, they are required to take an advanced English course for one additional year, which keeps their academic English progress on track. The second university delivers most departmental courses in Turkish; however, many of its departments also require a satisfactory English proficiency score. Students who fail to meet this requirement study in the preparatory program for at least a semester. In departments where English proficiency is not a formal requirement, students are still given the option to attend the preparatory school voluntarily for one or two semesters, depending on their goals and current level. Across both institutions, the critical point is that the proficiency exams use B2 as their benchmark. Students whose level is significantly higher than B2 would have already skipped the preparatory program and, therefore, were not available for participation. As a result, the natural proficiency band of potential participants fell between B2 and B2+, which aligns well with the aims of the present study. It is also worth mentioning that both institutions use British-origin publications as their main textbooks, even though they supplement them with in-house materials. It was also clarified by the institutions that their supporting materials included listening exercises, the audio tracks for which had been recorded by Turkish instructors employed in each department.

Since the participants were students who had just started university, their ages ranged naturally between 18 and 21. The older students who returned to school or repeated the same level because they couldn't pass the exam were not included in this study, as differing educational and personal backgrounds could introduce unwanted variability. All students self-identified as Turkish speakers and reported Turkish as their

native language. While Türkiye is a multilingual country and some individuals may grow up with additional home languages, the participants stated Turkish as their primary language of use. To avoid exposure-based variation, an additional criterion was that none of the students had lived abroad, and both parents were Turkish. This helped ensure that their linguistic background (particularly in terms of early phonological input) and distance to English was comparable, even if some may have passive knowledge of heritage languages spoken in their regions. That said, the multilingual reality of Türkiye is acknowledged. It's also possible that some students may hear or use other languages at home, like Kurdish, Arabic, or Circassian, even though they all identified Turkish as their first language. Still, any such background variation wasn't expected to create a systematic effect on their English comprehension in this context, though it may reduce generalizability. The task being measured concerns English intelligibility rather than cross-linguistic transfer patterns across typologically distant languages; therefore, minor heritage-language exposure was not treated as a confounding variable. Still, this remains a methodological limitation and is noted as such. Participants came from different cities, meaning their socioeconomic and educational experiences varied. Because this study focuses on comprehension outcomes rather than the sociolinguistic factors behind them, such background differences were not analyzed as separate variables.

Even if it was not a parameter that was checked for the study, it is also worth mentioning that both institutions at which the participants have been receiving English education have been using British-originated publications as textbooks throughout the relevant semester. It should be taken into consideration while interpreting the findings and their possible reasons due to the textbook's potential impacts on students' understanding and awareness levels, as mentioned by Tajeddin & Pakzadian (2020). "English textbooks can exert a profound effect on learners' understanding of English varieties and cultures" (p.5).

The related information of students participating in the comprehension test is summarized below.

Table 2. *Participants' Profile*

University / Institution Type	N	Native Language (L1)	Parental Background	Age Range	English Level (at entry)	Residence Abroad
Public State Univ. A (Ankara)	100	Turkish (self-reported)	Turkish	18–21	B2 / B2+ (based on placement or entrance exam)	None
Public State Univ. B (Ankara)	100	Turkish (self-reported)	Turkish	18–21	B2 / B2+ (based on placement or entrance exam)	None

Instruments

The participants took a comprehension test so that their comprehension levels of different varieties of English would be revealed based on their answers to the questions. For the conduction of the test, a recording and a comprehension test consisting of eighteen questions have been prepared by the researcher and proofread and approved by three different experts with relevant PhD degrees.

Comprehension test questions

The listening test and its script have been adapted from two different resources. Eleven of the questions have been adapted from the intermediate level listening materials, which were prepared by the test writers of the language prep department in a renowned state university in Türkiye a while ago and have been used in the classes since then. The testing department of this university is known for its professionalism and extensive analysis processes that have been carried out before the use of every item. As the items' reliability and validity would be trusted, they were adapted and abridged for the study after the official permissions were provided by the administration under the condition that the institution's name would remain anonymous. Seven questions that were also included in the test have been taken from High Note 4, owned by Pearson Publishing. As the length was suitable for the current study, no changes and/or abridgment have been applied.

While choosing the questions, many factors have been taken into consideration. To start with, all the questions are multiple-choice questions that require detailed listening. In other words, the sentences are not identical to the ones in the script, so scanning and skimming wouldn't be enough, and the participants needed to comprehend the whole sentence to be able to process it and find the correct answer. However, it was ensured that none of the questions required inference skills, which may occasionally call for a connection to the previously given ideas or information. Secondly, the English proficiency level of the questions has been analyzed, and all the ineligible questions and their scripts have been eliminated. Therefore, the questions and scripts are all B1+ level in the CEFR scale and in the band of 50-60 in the GSE scale. The Common European Framework of Reference for Languages (CEFR) serves as a widely acknowledged standard for assessing language proficiency. Learners at the intermediate level usually fit into the B1 to B1+ category, indicating that they can comprehend the key points of clear, standard conversations on topics they are familiar with (Council of Europe, 2001). As a result, selecting listening tasks at the B1+ level strikes a suitable balance between challenge and accessibility, aligning well with the cognitive and linguistic development of learners. Compared to the CEFR, the Global Measure of English (GSE) provides a more detailed proficiency measure. The GSE's 50–60 range, which represents B1–B2 levels, is appropriate for intermediate students and enables a more specialized selection of listening materials. In order to make sure all the scripts and questions fall within these scopes, both in the morphological and syntactic levels, they have been checked using online tools. The ones with higher levels have been completely eliminated, yet the

questions and/or scripts with one or two vocabulary items in a higher CEFR or GSE band have been adjusted to the required level. Moreover, their Flesch reading ease scores have also been checked in the selection process, ensuring they are between 60 and 75. Readability indices, such as the Flesch Reading Ease score, were originally designed for written texts. However, some studies have adapted them to pre-screen audio transcripts for lexical and syntactic complexity (Crossley et al., 2014). For intermediate learners, scores within this range are typically appropriate, particularly when dealing with instructional or semi-authentic listening input.

With an aim to test the students in different discourse types, the questions have a variety of brief talks, conversations, and discussions. Even though they do not have distinctive differences in terms of complexity, level, and necessary skills, the varieties have been tested in different contexts, such as news reports, academic conversations, business discussions, etc. It is important to note that not all the varieties have been represented in even numbers of various discourse types. One of the reasons for it is that this instrument aims to test the comprehension of as many different World Englishes as possible. To keep it at the optimum level, six accents have been selected, and for a healthier analysis, all varieties have been tested in three questions. The tests were applied within class hours to reach a high number of participants. If it had been intended to represent them in all discourse types, the length and duration of the test would have been unfitting both for the application time limits and participants' attention span to get the most reliable data with no rushed or made-up answers. Nonetheless, even if certain varieties are not equally represented among various discourse types, this does not fundamentally undermine the instrument's validity. Previous studies uphold the notion that construct validity is maintained when items consistently focus on comprehension skills, regardless of surface differences (Buck, 2001; Plonsky & Gass, 2011). Moreover, varying discourse modes improve the test's credibility (Field, 2008) and mirror actual language processing requirements (Wagner, 2014).

In order to check construct validity and make sure every three questions belonging to the varieties align with each other and consistently test the success rate of comprehension levels, a piloting process was completed before the test in question was taken into use. 30 participants who agreed to provide data and signed the consent form completed the comprehension test with the help of listening tracks. Their correct answer rates can be found below.

Table 3. *Item Consistency Table*

Accent	Number of Correct Responses per Question (out of 30)
British	28, 25, 26
South African	19, 18, 20
Russian	20, 18, 18
American	14, 13, 16
Indian	12, 11, 9
Spanish	9, 12, 14

As shown in Table 1, the questions representing each accent align within their group in terms of difficulty level. That's why it can be claimed that each trio effectively measured comprehension of the target accent. Having received these findings from the piloting stage, the data collection process was proceeded.

Recordings in different varieties

The scripts taken directly or after certain abridgment and/or simplification processes were recorded by six different people speaking with various World Englishes to ensure the participants are tested at an authentic level, instead of AI-generated voices. The varieties to be used were filtered through defined selection parameters. First of all, this process was led by a purposeful classification of nations based on their sociolinguistic relationship with English in an attempt to improve the analysis's generalizability and scope. The chosen types specifically reflect situations in which English is spoken as a foreign language (EFL), a second language (L2), and a first language (L1). Kachru's (1985) Three Circles Model divides English dialects into inner, outer, and expanding circles according to their sociolinguistic roles and historical origins. The goal of this classification was to give a more thorough picture of World Englishes and to depict the global character of English usage. This selection procedure aims to represent more people and more various linguistic encounters, and as the aim of the study is to unearth whether participants can comprehend different varieties, the possibility of encountering those specific varieties enhances the applicability of the results, giving us more insight. Six English accents—British, American, Indian, South African, Spanish, and Russian English—were chosen from these circles to guarantee both breadth and analytical depth. Because of their institutional dominance in educational institutions and their great frequency in international tests, academic materials, and media, British and American English, representing the inner circle, were included (Crystal, 2003; Jenkins, 2007). Through digital platforms and entertainment, American English in particular has a substantial global presence and is frequently used as the default accent in passive exposure. The outer circle, where English is used as a second language in multilingual cultures and has official significance in fields like education, law, and commerce, is best represented by Indian English, which an estimated 265 million people spoke according to Bolton's data presented in 2008 (Bolton, 2008). Despite having fewer speakers, South African English brings geographical diversity to the dataset and unique phonological traits from another outer circle context (Mesthrie, 2010, p. 19). The growing circle of English as a foreign language is represented by Spanish and Russian varieties of English. With more than 460 million native speakers, Spanish represents a sizable population of EFL users whose first language frequently affects how they pronounce English. In worldwide academic and professional contexts, Russian English offers an Eastern European viewpoint, and it has strong business relationships with Türkiye. It is also notable, as a final remark, that the availability of people to record the tracks was taken into consideration and influenced the selection alongside academic concerns.

After the proofreading of the scripts and questions by expert instructors holding PhDs in ELT, the anonymous participants completed the recordings. They followed the pace set by a short sample provided to them; therefore, no major adjustments to the recording's pace were necessary. The procedures for this part will be detailed in the data collection procedures section.

Verbal Guise Technique

Of the two techniques developed by Lambert (1967) to investigate listeners' reactions to different languages or varieties, this study makes use of a procedure inspired from the Verbal Guise Technique. Both methodological tools designed by Lambert (1967) expose participants to different languages or varieties to compare their responses while keeping the speakers' linguistic background and identities concealed. The VGT engages different speakers for each language or variety, while the MGT involves only one speaker in the listening track. As MGT has been criticized for "the unnaturalness of the prewritten texts (Hiraga, 2005), the ignorance of language phenomenon (e.g., code-switching), and linguistic elements (e.g., syntax and lexis) (Giles, 1970)" (as cited in Chan, 2021, p.1) and this study was designed in a way to utilize six different speakers to enhance authenticity that mimics real communication features, Verbal Guise Technique (VGT) was found to be more suitable.

Nevertheless, it is important to note that VGT, which is a technique employed to examine listeners' attitudes to different languages or varieties, has much more to offer than attitudinal research. In this study, the technique was not directly used but adapted to investigate listening comprehension rather than reactions while maintaining the core element, which is keeping the information of which speaker performs in which variety from the participants. VGT is a powerful tool here "to elicit the stereotyped impressions or biased views which members of one social group hold of representative members of a contrasting group" (Lambert, 1967, p.93) in order to eliminate pre-determined opinions towards each speaker, which may affect the results of the comprehension test. Therefore, through this adapted use of the VGT, the study utilized an accent-based audio stimulus approach that enabled the examination of comprehension across English varieties without collecting attitudinal ratings.

This is a key part of the research as a VGT-inspired method lets us test understanding more accurately by focusing only on what is said and how it sounds, without relying on assumptions about the speakers. It also strengthens the study's internal validity and gives more accurate measures of how intelligible each variety is.

Data Collection & Analysis

Firstly, the study was approved by the Hacettepe University Social Sciences and Humanities Research Ethics Committee, and all necessary permissions were obtained from the relevant institutions, with the condition of maintaining anonymity. All the

participants, including the voice recorders and test participants, gave online consent by approving an online consent form. Participants were assured that their data would be shared only with the researcher and stored for five years under institutional policies before secure deletion. During the voice-recording phase, individuals from six nationalities, who spoke English natively or at least at a B2 level, were interviewed. Should they be willing to participate, they were asked to record the tracks provided for them. As most of them currently live in their home countries, they were kindly requested to record themselves and email the recordings. They all demanded to remain anonymous, so no information related to them will ever be shared publicly. They were provided with a sample recording to check in terms of pace, and they were required to prepare clear recordings with no background noise. After all the audio tracks were obtained, they were merged to form the discourse types in the tasks (brief talks, conversations, and discussions).

Several post-processing methods were applied during editing to ensure consistent audio quality across all recordings. To maintain clarity and intelligibility, the audio was equalized, background noise was reduced, and loudness was leveled. As the speakers closely followed the provided sample track, no major speed adjustments were needed. In order to prevent variations in playback quality, all audio files were also converted to the same format. To produce consistent acoustic settings and avoid potential bias resulting from technical variances rather than linguistic content, the recordings were edited using GarageBand. After the recordings were ready to use, a test process was completed by three English language instructors working at a preparatory school of a university in order to eliminate the proficiency-related factors and to check if a person with high proficiency can answer all questions correctly by listening to the recordings. The results of the test turned out to be successful, and all three teachers completed it with no wrong answers. They hadn't listened to the recordings or read any of the scripts before, and that verifies the quality of the recordings both in terms of speakers, editing, volume, and content. The piloting process with the student participants, which is explained above, also verifies that these features were stable during the recording, as no unacceptable discrepancies were detected in the findings. Those students were excluded from the study after the piloting phase, even though their profiles identically matched the study's required criteria.

The participants of the comprehension test were called on to complete a 20-minute procedure, which was completed in their own classes to make the venue most convenient for them. It was on a voluntary basis, so unwilling students had the chance to decline the offer and not provide data for the research.. They were informed of the purpose and the nature of the study as well as what was expected from their party. The comprehension test was carried out online because the number of participants was quite high, so the paper consumption would cause a huge waste in that number. Moreover, the amount of data became more manageable when taken directly in an online environment. The participants were asked to scan a QR code, which directed them to the test after giving

online consent. The recording was played once after the volume check had been completed. It was planned to answer some task-related questions, such as vocabulary or grammatical structure, yet none of the students requested to ask a question, which shows the language level of the task was appropriate for the participants and aligned with the research plan. The students didn't need to provide any other type of data; however, some unofficial comments were heard and noted for further research adaptations.

Data Analysis process was performed in an analysis software called Jamovi, which is known for its user-friendly interface and suitability for education-related research. A mix of descriptive and inferential statistical methods was used to answer the study question about the intelligibility of various World Englishes. A one-way ANOVA was first performed to determine whether the participants' comprehension scores for the six chosen English accents differed in a way that was statistically significant. A Welch's ANOVA was also conducted to take into consideration any possible breaches of homogeneity of variances due to the large sample size. Furthermore, the Shapiro-Wilk test of normality was used to evaluate the data distribution and guarantee that parametric testing was adequate. Tukey's HSD post-hoc tests were used to examine pairwise differences between the accent groups after the omnibus ANOVA, while accounting for Type I error. Through these studies, it was possible to examine more closely which varieties of English differed in terms of intelligibility as determined by participant comprehension scores. A repeated measures ANOVA was also conducted to confirm and validate the findings because the design was within-subjects, meaning that each participant answered questions in all six accents. To find any consistent differences in replies, the interaction effects between the within-subject component (accent) and participants' comprehension performance were investigated. By taking into consideration both within-subject and between-group heterogeneity, this multi-step analytical technique guaranteed a thorough investigation of accent intelligibility.

Findings

This section presents the results of the comprehension test across six World English varieties, offering a detailed examination of patterns, differences, and reliability measures. The descriptive statistics, inferential analyses, and post-hoc comparisons together provide a comprehensive picture of how the participants performed and highlight notable trends in intelligibility across varieties in this study.

The results of descriptive statistics analysis, which answers both research questions in an interwoven way, indicated notable variation in comprehension scores across varieties. Mean scores (out of 1.00) and standard deviation of each variety can be seen in the table below.

Table 4. *Descriptive Statistics*

Accent	N	Mean (%)	Std. Deviation
American	600	49.5	50.0
British	600	81.7	38.7
Indian	600	49.0	50.0
Russian	600	75.8	42.8
South African	600	70.0	45.9
Spanish	600	56.5	49.6

A first glance at these figures shows a strong advantage for British English, which yielded the highest mean comprehension score (81.7%). Russian and South African English also scored relatively highly, while American and Indian English had the lowest mean scores. The large standard deviations for American, Indian, and Spanish English (≈50) show substantial variability in comprehension: some participants understood these varieties easily, whereas others struggled. This variability may reflect differences in prior exposure or in the phonological transparency of the accents. Those factors will be discussed in detail in the upcoming sections.

Beyond the mean scores, the way participants' answers spread across each variety also provides important insight. The varieties with higher averages, especially British English ($M = 81.7$, $SD = 38.7$) and Russian English ($M = 75.8$, $SD = 42.8$), showed much tighter clustering around the mean, which suggests that students not only understood these accents better, but did so in a more consistent way. On the other hand, the lower-scoring varieties, such as American ($M = 49.5$, $SD = 50.0$) and Indian English ($M = 49.0$, $SD = 50.0$), were marked by noticeably wider spread. In practice, this means performance varied a lot from student to student: some followed these accents without much difficulty, while others clearly struggled. Spanish English ($M = 56.5$, $SD = 49.6$) sat in the middle, mirroring its intermediate mean score. Altogether, these distribution patterns help make sense of the standard deviations shown in Table 2 and support the interpretation that the varieties understood more easily were also the ones understood more steadily across the group.

A one-way between-subjects ANOVA (Welch's) was conducted to determine whether these differences were statistically significant. The test confirmed a significant effect of variety on comprehension scores ($F(5, 1674) = 58.10$, $p < .001$), indicating that participants' understanding varied systematically across varieties. Normality was checked using the Shapiro-Wilk test ($W = 0.820$, $p < .001$), a result expected in a large dataset; however, the ANOVA design remains robust under such conditions, especially with the use of Welch's correction.

Table 5. *One-way Between-subjects ANOVA (Welsch's)*

Source	df	F	p
Between Groups	5	58.10	< .001
Within Groups	1674		
Total	1679		

Table 6. *Shapiro-Wilk Normality Test*

Variable	W	p
Score	0.820	< .001

Having seen the significance, Tukey's HSD post hoc comparisons (Table 5) were conducted to explore pairwise differences between variety groups.

Table 7. *Tukey's HSD Post-hoc Comparisons*

Comparison	Mean Difference	p-value
American – British	-0.322	< .001
American – Indian	0.005	1.000
American – Russian	-0.263	< .001
American – SouthAfrican	-0.205	< .001
American – Spanish	-0.070	0.094
British – Indian	0.327	< .001
British – Russian	0.058	0.248
British – SouthAfrican	0.117	< .001
British – Spanish	0.252	< .001
Indian – Russian	-0.268	< .001
Indian – SouthAfrican	-0.210	< .001
Indian – Spanish	-0.075	0.058
Russian – SouthAfrican	0.058	0.248
Russian – Spanish	0.193	< .001
SouthAfrican – Spanish	0.135	< .001

The analysis of comprehension scores reveals a distinct pattern across the six English varieties. British English emerged as the most intelligible, consistently outperforming all other varieties in the study. Russian and South African English also produced relatively high comprehension scores, surpassing American and Indian English in this specific context. This suggests that participants' prior exposure to these varieties, together with their phonological clarity, facilitated understanding. Spanish English occupied an intermediate position: its comprehension scores were lower than those for British, Russian, and South African English, yet not significantly different from American English. Both American and Indian English were the least comprehensible, highlighting potential difficulties learners face when processing L2-influenced or widely circulated accents in a context devoid of cultural or attitudinal cues.

Post-hoc results also make it clear that the differences between accents do not fall into a single straight ranking. British English stands distinctly ahead of all the other varieties, and the gap is both large and consistently significant. By contrast, American and Indian English show almost no measurable difference, which suggests that participants found these two varieties roughly equal in difficulty. The comparison between Spanish and American English comes close to significance but does not pass the required level, indicating that listeners processed these two accents in a similar way. Overall, the results point to groups of varieties that cluster together in terms of comprehension rather than one simple top-to-bottom order.

It is important to note, however, that ranking accents in this manner doesn't aim to generalize results across global contexts and generate biased opinions. This study only reports the observed differences in intelligibility strictly based on the relevant participants' comprehension scores, without attributing inherent superiority or inferiority to any variety. Consequently, the resulting pattern can be described descriptively as British > Russian > South African > Spanish > American ≈ Indian,

reflecting relative intelligibility in this specific testing context rather than endorsing any value-based hierarchy among World Englishes.

To assess study reliability, the internal consistency of questions within each variety was examined. Cronbach's Alpha test (Table 6) was carried out to determine if the questions within the same variety were consistent.

Table 8. *Cronbach's Alpha*

Accent	Number of Items	Cronbach's α
British	3	.994
South American	3	.985
Russian	3	.996
American	3	.949
Indian	3	.980
Spanish	3	.962

All values exceed .94, confirming that the questions within the varieties were consistent enough to test the same variety without damaging the generalizability of the outcome due to the changes caused by variables other than the varieties themselves, which proves the finding accurate, as no items are in conflict. Yet, a deeper analysis by Within-accent Repeated Measures ANOVA was also conducted to gain more insight.

Table 9. *Within-Accent Repeated-Measures ANOVA*

Accent	Within df	Residual df	F	p
British	2	398	16.2	< .001
South African	2	398	23.4	< .001
Russian	2	398	7.91	< .001
American	2	398	33.6	< .001
Indian	2	398	10.8	< .001
Spanish	2	398	50.9	< .001

The repeated-measures ANOVA performed for each accent showed significant item-level differences across the three questions (all $p < .001$): British, $F(2,398) = 16.2$; South African, $F(2,398) = 23.4$; Russian, $F(2,398) = 7.91$; American, $F(2,398) = 33.6$; Indian, $F(2,398) = 10.8$; Spanish, $F(2,398) = 50.9$. These results indicate that participants' performance varied across items within every accent, which is an expected outcome in listening tests where item difficulty is never identical. Crucially, however, these within-accent fluctuations did not overturn the overall pattern established by the accent means: accents that ranked higher in Table 2 remained higher across their items, and those that ranked lower remained lower (British = 81.7%, Russian = 75.8%, South African = 70.0%, Spanish = 56.5%, American = 49.5%, Indian = 49.0%). In short, item-level variability exists and is statistically significant, but it reinforces rather than undermines the main intelligibility pattern reported above.

Another point that strengthens the findings is the consistency of the statistical outcomes across multiple tests. The descriptive statistics, ANOVA results, post-hoc comparisons, and reliability measures point in the same direction, each confirming the presence of meaningful differences between varieties. This alignment across different analytical steps

demonstrates that the observed patterns are not artefacts of a single statistical method but stable across complementary procedures.

The comprehension results show a clear and consistent pattern across the six English varieties. British English scored the highest, followed by Russian and South African English, while American and Indian English had the lowest scores, with Spanish English falling in between. Statistical analyses, including ANOVA, Welch's test, and Tukey's HSD post-hoc comparisons, confirmed that these differences are significant. Cronbach's Alpha reliability checks indicate that the questions within each variety were consistent, ensuring that the differences observed are due to the accents themselves rather than inconsistencies in the test items. Overall, these findings establish a ranking of intelligibility, which is specific to this setting and set of participants: British > Russian > South African > Spanish > American ≈ Indian. This pattern, drawn directly from the data, provides a solid foundation for the discussion section, where potential reasons behind these differences, such as exposure, phonological features, or familiarity, can be examined without making assumptions beyond the results. The item-level results also strengthen the overall picture. Even though the repeated-measures ANOVA showed the expected variation from one question to another within each variety, these small shifts didn't change the general outcome. The varieties that scored higher on average maintained their lead across all three items, and those with lower means consistently remained at the bottom. This indicates that the observed differences arise from the accents themselves, rather than from any accidental difficulty or imbalance in specific test items.

Discussion

This section reports results from the comprehension test across six World English varieties and directly addresses RQ1 and RQ2. Descriptive statistics, inferential analyses, and post-hoc comparisons together provide a clear picture of participants' performance and reveal trends in intelligibility across varieties. These trends are specific to this participant group and learning context and are not intended to suggest a universal hierarchy of World Englishes.

The descriptive statistics (Table 4) reveal considerable variation in comprehension scores across varieties. British English emerged as the most intelligible variety (M = 0.817, SD = 0.387), which aligns with previous research emphasizing the dominance of standard varieties in English language education and media: "The first face is that of the linguistic imperialism associated with the three major countries—the UK, the USA, and Australia" (Kachru, 1997, p.73), and "in many parts of the world, two dominant native-speaker varieties of English, namely British and American English, have been used as the main pedagogical models for ELT" (Sung, 2016, p.191). Being a country in the Inner Circle of Kachru's Three Circles Model (1997), a higher comprehension level of British English in this research aligns with the previous findings presented by several scholars (Baptiste, 2022; Verbeke & Simon, 2023). The model, being a historical and sociolinguistic model by its nature, can reinforce some findings, as well. Considering the military and colonial power the British Empire held, it was the country that spread the

language across the globe and has often been argued to claim a form of custodianship over English (Widdowson, 1994). Many sources note that the British Empire also oversaw the process of English language teaching around the world, positioning itself as an "owner" of the language. This process was famously stated as "Once we used to send gunboats and diplomats abroad; now we are sending English teachers" (International House Archive, 1979), alongside the establishment of English-medium schools (Phillipson, 1992, p. 24). As a result, British institutions and publishers have long played a central role in producing English language teaching materials. Previous research indicates that many textbooks still used in educational institutions, whether British-originated or not, continue to include the British or American Englishes (Chiba et. al., 1995), which means that students are heavily exposed to these varieties. Similarly, "some reputable or international schools still use native-centered curricula such as Cambridge as their reference in teaching English" (Hariri et al., 2019, p. 165). Specifically, in this context where data were collected from students attending the preparatory schools of two different universities, both of which use British-origin textbooks as their main course materials, the outcome can be supported by statements in the literature. This sustained exposure may be one of the reasons why the British variety was more easily comprehended than the other varieties in this study. This finding also illustrates how pedagogical norms and material choices can shape learners' listening repertoires, with implications for how intelligibility is constructed in classroom contexts.

This finding may also be partly explained by entertainment-related factors noted in the literature. The UK was described as "the pop workshop of the planet" by Reynolds (1996) (as cited in Crystal, 2012, p. 109), and UK-based television series, films, and music have continued to gain global visibility through streaming platforms and international media circulation. Considered together, such forms of informal exposure may further reinforce learners' familiarity with British English beyond formal instruction, particularly for the present age group, which is generally reported to consume substantial amounts of entertainment content.

Russian (M = 0.758, SD = 0.428) and South African English (M = 0.700, SD = 0.459) also scored relatively high, whereas American (M = 0.495, SD = 0.500) and Indian English (M = 0.490, SD = 0.500) produced the lowest mean scores in the current context. Spanish English (M = 0.565, SD = 0.496) occupied an intermediate position. The higher standard deviations observed for American, Indian, and Spanish varieties indicate considerable individual differences: while some participants understood these accents well, others struggled, suggesting that prior exposure (Doloricon & Langga, 2022; Gass & Varonis, 1984; Ockey& French, 2016) and phonological transparency may have played a role. Of all the results, the American English finding stands out because it contradicts many prior findings in the literature. As mentioned previously, it is recognized as a main standard variety, alongside British English, within the Inner Circle of Kachru's Three Circles model (1985). Yan and Vaseghi (2002) verified it in the statement of "…two major English accents: British English and American English" (p.413). As another colonial power ruling

multiple countries, it has exerted a significant influence on the spread of English and on its nativisation and globalisation (Northrup, 2013). With this power and ownership, it has contributed to English language teaching by developing educational models and publishing textbooks, and it serves as a primary pedagogical model in the materials, even when it is not the publishing country. “Most EFL textbooks, including those published in Japan, take Standard American English or Standard British English as the model” (Morrow, 2004). In the literature, "the inexorable pressure of American global hegemony in its all guises: fast foods, pop music, films, middle-class TV sitcoms…” (Bayard et. al., 2001, p.41) was pointed out as American-originated entertainment industry has such a significant impact that it is a part of the process called “Americanization” (Phillipson, 1992). “The universal presence of a globalized America and by the worldwide distribution of brands such as McDonald’s and Coca Cola, which served as powerful heralds of Americanization first, and globalization later” (Cristani, 2021, p. 1) was a key factor in the widespread exposure to American English worldwide. Bradac and Giles (1991) also accepted the existence of “the powerful influence of American media-culture on young people today (transmitted through films, television, advertising, etc.)” (as cited in Ladegaard & Sachdev, 2006, p. 93), which is relevant to the context of this study since the participants are young adults. Despite its global prominence and widespread media presence, American English did not yield higher comprehension scores in the present context, suggesting that factors beyond global exposure may have influenced learners’ processing of this variety. For instance, although the key role of the USA in textbooks and instructional materials has been widely acknowledged, the data were collected in a context where UK-published textbooks were used as the primary course materials; therefore, learners had relatively limited systematic exposure to the American variety. This contextual factor may partly explain why British English received significantly higher comprehension scores than American English in the present study, despite the latter’s global prominence and cultural visibility.

The results suggest that how learners are exposed to a variety can matter more than how often they encounter it. Learners regularly hear American English through movies, TV shows, music, and online media, but this input is usually informal, passive, and supported by visuals or subtitles. In this study, however, the listening test required them to understand speech using only what they heard. Earlier research indicates that different exposure types lead to different listening outcomes and that structured, repeated classroom input is especially important for intelligibility (Gass & Varonis, 1984; Ockey & French, 2016). Although American English is considered a standard Inner Circle variety (Kachru, 1985), it features phonological patterns such as vowel reduction, flapping, and extensive connected speech, that can be difficult without explicit training. Since the participants were mainly taught with British-oriented materials, their listening habits and expectations were likely shaped by British norms, which may have lowered the intelligibility of American English for them. Overall, this supports the view that intelligibility depends heavily on context and teaching practices rather than global status alone (Gass & Varonis, 1984; Ladegaard & Sachdev, 2006; Ockey & French, 2016), and it

underlines the need to broaden listening input beyond dominant native-based textbook models, even for widely recognized varieties.

The fact that Russian and South African Englishes are understood to a greater extent than Spanish and Indian Englishes in this immediate context, and that all of them are non-native varieties, offers a different type of insight. According to Kachru (1985), South African and Indian English varieties fall into the Outer Circle, whereas Russian and Spanish varieties belong to the Expanding Circle. When the distribution of intelligibility scores is considered alongside Kachru's Three Circles framework, particularly the fact that the higher- and lower-scoring varieties belong to different circles, certain preliminary inferences may be drawn regarding the relationship between circle membership and comprehension. While Kachru's (1985) Three Circles framework has been influential in describing how English has spread historically and how different varieties are positioned sociopolitically and normatively, the findings of the present study suggest that it does not, on its own, explain why some varieties are more intelligible than others. In line with earlier work, the results indicate that intelligibility is influenced less by which "circle" a variety belongs to and more by its phonological properties, the kinds and amount of exposure listeners have had, and the extent to which speakers' and listeners' linguistic repertoires overlap (Jenkins, 2000; Seidlhofer, 2011; Smith & Nelson, 1985). In this context, Russian-accented English may have been easier for participants to understand because of its phonological profile, which is typically more segmental and more syllable-timed, and involves relatively limited vowel reduction and linking. These characteristics tend to create clearer syllable breaks and reduce connected-speech simplification, so the speech stream is easier to hear and follow. This may have helped the Turkish learners understand the input, since their own English is also likely to feature strong consonant production, little vowel reduction, and relatively clear syllable boundaries. Previous work has shown that this kind of phonological similarity between listeners and speakers can support intelligibility in ELF settings (Jenkins, 2000; Seidlhofer, 2011; Smith & Nelson, 1985). South African English also yielded relatively high comprehension scores in the present study. One factor that may have contributed to this result is the internal variability of the variety. South African English is characterized by a wide spectrum of accentedness, ranging from realizations strongly influenced by Afrikaans to forms that are close to British Received Pronunciation (Crystal, 2012). This variability makes South African English a particularly relevant case for accent modelling (Kamper et al., 2012). In the present study, the speaker representing South African English was known to have an Afrikaans L1 background, which may have resulted in Afrikaans-influenced phonological realizations within this spectrum. Within this range, comprehension may have been supported by partial overlap with phonological patterns familiar to the participants, rather than by proximity to a single target norm such as RP. Although the speaker representing South African English in the present study had an Afrikaans L1 background, certain features within the broader South African English spectrum may still align with expectations shaped by British-oriented instructional models. In this sense, the relatively high intelligibility of South African English can be

interpreted not as a direct result of RP-like realization, but as an outcome of possible phonological compatibility between the speech sample and the listeners' established perceptual routines.

The relatively low intelligibility of both Indian English and Spanish English in the present study appears to be due less to their position within World Englishes frameworks and more to specific phonological features and limited listener exposure. In the case of Indian English, vowel and consonant realizations, as well as rhythm patterns, may diverge from listeners' expectations, which are typically shaped by dominant pedagogical norms (Gargesh, 2008). Likewise, Spanish-accented English may have clearly marked syllable boundaries and reduced vowel reduction reflected from the nature of the Spanish language. Although these features are not intrinsically unclear, they may sound unfamiliar to learners who have been primarily exposed to British-oriented teaching materials. For listeners with little previous contact with these varieties, such phonological differences are likely to increase processing demands, which helps explain the lower comprehension scores obtained for both varieties in this study. Therefore, the gap between the variety of participants' native language and the target variety may be larger than others, which is known to cause intelligibility to be lower (Deterding & Kirkpatrick, 2006).

Overall, the results reveal a clear and coherent intelligibility pattern within the boundaries of this study. What this pattern reflects is not the inherent value of one variety over another, but the relative ease with which the participants were able to understand them. The fact that descriptive statistics, inferential analyses, post-hoc comparisons, and reliability measures all converge on the same outcome strengthens the interpretation and suggests that the findings are firmly grounded in learner performance rather than methodological coincidence. When considered alongside previous research, the findings of the present study reflect the context-dependent nature of intelligibility reported in the literature. While some studies suggest that native varieties are generally more intelligible than non-native ones (Baptiste, 2022; Verbeke & Simon, 2023), others report no clear advantage for native varieties or even greater intelligibility for non-native accents, depending on context and listener background (Jeong et al., 2022; Kang et al., 2019; Smith & Nelson, 2019; Walt, 2000)In the Turkish context, the higher intelligibility of British English is consistent with earlier findings highlighting the role of familiarity and instructional exposure (Büyükahıska & Uyar, 2019). At the same time, the relatively low intelligibility of American English contrasts with some local studies (e.g., Kurtuldu & Özkan, 2022), further supporting the view that intelligibility outcomes are shaped by pedagogical practices and learning environments rather than by fixed distinctions between native and non-native varieties.

From a pedagogical point of view, the results point quite clearly to the role of instructional exposure. The variety that learners had encountered more systematically within their formal education was easier for them to process, whereas the varieties that fell outside this instructional experience seemed to be more challenging. This suggests that listening ability develops through repeated and patterned exposure, not simply

through incidental contact or global visibility. When instruction is built around a narrow set of standard models, learners may struggle to cope with unfamiliar accents, even those that are highly present in global media, as illustrated by the case of American English in this study. For this reason, the intelligibility outcomes should not be read as establishing fixed hierarchies among English varieties. Rather, they highlight the consequences of pedagogical choices and exposure patterns. As Kılıçkaya (2009, p. 37) notes, if the goal is to enable learners to communicate across cultures, instruction should prepare them to understand and tolerate a range of accents and varieties through exposure. This view is also in line with Global Englishes research, which calls for moving beyond native-speaker benchmarks and for rethinking listening instruction in ways that reflect the diverse realities of English use worldwide (Dewey, 2012; Galloway & Rose, 2015, 2018). Seen in this light, intelligibility data function less as a ranking of accents and more as a diagnostic tool. They show where exposure is limited, where listening expectations are narrowly shaped, and where pedagogical balance may be missing. Broadening the range of spoken models in instructional materials, alongside developing learners' awareness of variation, may therefore support more flexible listening strategies and a more open orientation toward different forms of English, rather than reinforcing norms tied to a small set of familiar varieties.

Limitations

This study used speakers with various English accents for the audio recordings; however, the degree of accentedness was not systematically measured or controlled to preserve ecological validity and reflect realistic communicative encounters. While this approach increases authenticity, it also means that the intelligibility scores obtained in this study may differ from those that would emerge with speakers exhibiting heavier or more salient L1-influenced phonological features. As such, this limitation may slightly constrain the generalizability of the findings, even though the purpose was to investigate an authentic comprehension. In addition, detailed regional background information was not available for all speakers. While the regional origins of the British, American, Indian and South African speakers were known, the specific regional varieties of the Russian and Spanish speakers were not precisely identified. Given that intra-varietal variation can influence intelligibility, this lack of detailed regional profiling should be acknowledged as a limitation. Furthermore, the study did not control for or systematically analyze potential effects of variables such as gender, age, speech rate, or speaker-specific delivery features. Previous research suggests that these factors may interact with accent perception and intelligibility. Consequently, their exclusion should be regarded as a methodological limitation.

The participant sample was limited to 200 intermediate-level students enrolled in the preparatory programs of two state universities. Although all participants were identified as Turkish L1 speakers, no detailed screening was conducted regarding additional languages spoken, regional dialectal background within Turkey, or prior multilingual experience. Considering Turkey's linguistic and regional diversity, these

factors may have influenced individual listening performance and could not be fully controlled within the scope of the present study.

Finally, although the six World English varieties were selected based on their global presence and likelihood of learner exposure, they cannot represent the full spectrum of English varieties in use worldwide. Rather than offering an exhaustive account, the study aims to contribute context-specific evidence that may stimulate further research. Future studies incorporating a wider range of varieties, more detailed speaker profiling, and additional listener variables would help refine our understanding of intelligibility in global English communication and support more informed pedagogical decision-making.

Conclusion and Recommendations

Languages are dynamic systems that evolve in response to social, historical, and communicative needs. When English functions as a shared communicative resource among speakers who do not share a common first language, its effectiveness depends on mutual intelligibility across diverse uses. From an English as a Lingua Franca perspective, terms such as "comprehensibility" and "intelligibility" are central to sustaining communication in domains such as education, business, and international mobility, where English serves as a primary medium of interaction (Nagy, 2016). Within this framework, the present study set out to examine how Turkish university learners comprehend different varieties of World Englishes in an educational context.

The listening comprehension task, which drew on ideas from the Verbal Guise Technique (Lambert et al., 1967), showed a clear but context-dependent pattern of how differently participants comprehended the varieties. Among the six varieties tested, British English received the highest comprehension score. This likely reflects their long-term exposure to British-focused teaching materials and classroom practices. However, this should not be taken to mean that British English is inherently better or more universally understandable. The fact that American English scored lower on intelligibility—even though it is widely heard in global media—suggests that what really matters is the type and amount of exposure learners have, rather than a variety's status or international reach. In the same way, the lower intelligibility of Indian and Spanish English indicates that listeners' expectations about pronunciation, their level of familiarity with a variety, and their previous listening experience all work together to shape how well they understand spoken English.

These results reinforce the view that intelligibility is fundamentally context-dependent and cannot be adequately explained by any predetermined judgments or World Englishes classifications alone. While frameworks such as Kachru's Three Circles remain valuable for understanding the historical and sociopolitical positioning of English varieties, the present findings support previous research showing that phonological features, exposure patterns, and overlap between speakers' and listeners' linguistic

repertoires play a more decisive role in comprehension. In this sense, intelligibility should be understood as an emergent outcome of learning histories and listening practices rather than as a fixed property of particular varieties.

From a pedagogical perspective, the study highlights the need to reassess how linguistic input, particularly in listening, is designated in English language teaching. The strong association between familiarity and intelligibility observed in this study hints that learners' limited exposure to diverse varieties may confine their ability to process variation in real-world communication. Rather than reinforcing a narrow set of native and/or standard models, instructional practices could benefit from systematically incorporating a wider range of English varieties, enabling learners to acquire flexible listening strategies and greater tolerance towards diversity by "introducing different varieties of English, revisiting the ownership of English,…, problematizing the standard NS language ideology, recognizing the plurality of cultures English mediates, emphasizing respect for speakers with diverse lingua-cultural backgrounds (D'Angelo, 2021; Marlina, 2013; Matsuda, 2018; Rose & Galloway, 2019)" (as cited in Jindapitak, 2022, p.281). Within a Global Englishes pedagogy framework (Dewey, 2012; Galloway & Rose, 2015; Galloway & Rose, 2018), intelligibility data should be used diagnostically to identify gaps in exposure and listening experience, rather than prescriptively to rank or privilege particular varieties.

Several possibilities for further research emerge from this study. Future work could examine the effects of structured exposure to World Englishes on learners' intelligibility over time or explore how multimodal input and visual support interact with processing. Additionally, qualitative methods such as learner interviews or diaries could provide deeper insight into how attitudes, familiarity, and listening strategies influence comprehension. Investigating different learner profiles and educational contexts would further contribute to understanding how intelligibility patterns fluctuate across settings. By positioning intelligibility within learners' educational experiences, future research can continue to inform more inclusive and realistic approaches to English language teaching in global contexts.

Ethical Approval

This study was approved by Hacettepe University (Protocol number: E-51944218-050-00003930756).

Consent from the participants has not been granted to use any personal information. The participants who completed the recordings agreed that their voice tracks would be used indefinitely until the study is complete and stored after that for at least five years. They were free to share their names or remain anonymous, and all of them preferred the latter option. The same confidentiality procedures were applied to participants in the comprehension test. The participants were informed that their data were supposed to be stored for the same period without being shared with anyone except

for the researcher. Also, they were granted that all data they provided would remain confidential and never be disclosed.

The consent from all participants has been gathered through an online written consent form that was approved by the Hacettepe University Social Sciences and Humanities Research Ethics Committee before the launch of the research. The participants were required to read the provided explanation carefully and express any inquiries that they might have. They were also reminded orally that they may leave the study at any stage of data collection should they feel uncomfortable and like their rights are being violated. In that situation, all the data they provided up to that point would be deleted completely, and they wouldn't be asked for any explanations. If they agreed to volunteer, they gave their consent in the online environment. The ones who didn't give consent were supposed to leave class before the application of data collection procedures started; however, no students declined the offer.

Author Contributions

İrem Yılmaz: Conceptualisation, Theoretical Background, Methodology, Data Analysis, Data Visualisation, Writing, Review and Editing, Funding Acquisition

Nuray Alagözlü: Conceptualisation, Methodology

Conflict of Interest

The authors declare no conflict of interest.

Declaration on the Use of Artificial Intelligence

In the preparation of this manuscript, an Artificial Intelligence platform (Google Gemini) was utilized for the purposes of proofreading and minor language editing. The AI tool was not used for data analysis, interpretation, or generation of the study's content. All these parts of the research and the manuscript were completed by the authors, who take full responsibility for the integrity and originality of the work.

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